1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6

attachment of separate pieces." "A small *tiki* figure was sometimes but not always attached to the tip of the stern piece." (20.)

Temporary decoration consisted of coconut leaves, white cloth, and human hair; and "coconut fronds, which were commonly placed along the sides of the bow and stern platforms with their lower edges trailing in the water" (20). On the canoe with the two platforms described above, Stewart (26, p. 219) observed three green coconut leaves four or five feet high, which were fastened erect on the bow piece. It is probable that these were symbols of peace. Lines were run from the stern piece to corners of the steersman's platform and from these lines hung tufts of human hair and bits of white cloth (26, pp. 220-1). Stewart (26, p. 304) describes skulls as being lashed on each corner of the platform at the stern of a war canoe. Under the lashings that held the outside binding strip along the gunwale were put white feathers of the tropic bird, so that the plumed ends were visible—these gave the appearance and impression of speed and, doubtless, in the native mind were potent to make actual in the canoe this quality of the tropic bird.

Crews

Modern informants say that the crews of large canoes numbered from one hundred and forty to one hundred and sixty men. Garcia ((14, p. 233), on the other hand, puts the number at forty or fifty. Legends commonly speak of a larger number and relate that, usually, in the Marquesas two hundred and eighty (*e fitu touha*—that is to say, seven forties) warriors constituted the crew of a war canoe or a voyaging canoe. The captain (*ava-ika*) had charge of the handling of both fishing and war canoes, and doubtless was usually, if not always, the steersman—his name indicating that he was a fisher by profession. The captain stood on the stern platform which was also the place of the chief. A large paddle (*kapekape, uki*) served for steering. In small canoes paddlers sat two on a seat, in large canoes four abreast, working in shifts, two by two. They paddled rythmically in unison (14, pp. 233-4).

While part of the crew was occupied in paddling, others were busy bailing.

Ownership of Canoes

The information given by modern natives led me to believe that a large canoe was always the property of the chief of the tribe. Porter, however, gives interesting evidence of parts of a single canoe being owned by different individuals. He says (24, p. 101):

5: Porter T-5 (1812-1814)1823
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with it; and in a short time we are induced to think that tattooing is as necessary an ornament for a native of those islands as clothing is for an European.

The young girls, which we had an opportunity of seeing, were handsome and well formed; their skins were remarkably soft and smooth, and their complexions no darker than many brunettes in America, celebrated for their beauty. Their modesty was more evident than that of the women of any place we had visited since leaving our own country; and if they suffered themselves (although with apparent timidity and reluctance) to be presented naked to strangers, may it not be in compliance with a custom, which taught them to sacrifice to hospitality all that is most estimable.

The canoes are generally about forty feet in length, thirteen inches wide, and eighteen inches deep. They are formed of many pieces of the bread-fruit tree, cut into the form of planks, and sewed together with the fibres of the outside shell of the cocoa-nut. The seams are covered inside and out with strips of bamboo, sewed to the edge of each plank, to keep in a stuffing of oakum, made of the cocoa-nut shell also, which does not prevent them from leaking sufficiently to give constant employment to one or two persons to bail the water out. The keel consists of one piece, which runs through the whole length, is hollowed out in the form of a canoe, and seems to stiffen the whole vessel, and keep it straight. Three pieces of thin plank, placed in the manner of partitions, divide the interior into four parts, and perform the office of timbers to keep the vessel from separating or closing together. Out-riggers from the bow, middle and stern, with a long piece of light wood secured to the extremity of each, keep them from upsetting, which, from their narrowness, would frequently happen were it not for this contrivance. The ornamental part consists of a flat prow, which projects about two feet, and is rudely carved on the upper surface, to represent the head of some animal. Sometimes there is attached to it a small board, supported by a rudely carved figure of a man. From the stern is a slender projection of six or eight feet in length, and in the form of a sleigh runner, or the forepart of a Holland skate. Their paddles are very neatly made, of a hard black wood highly polished. Their handles are slender, the blades of an oval form, broadest toward the lower part, and terminating in a point like a hawk's bill. They were all without sails, and did not appear to be managed with much skill or dexterity.

5: Porter T-5 (1812-1814)1823
OX6 Marquesas OX6

501 422 valley, and divided, perhaps, among twenty families. Each has the right of disposing of the part belonging to him, and when she is to be set up, every one brings his piece, with materials for securing it. The setting up a war canoe goes on with the same order and regularity as all their other operations. These canoes are owned only among the wealthy and respectable families, and are rarely used for the purposes of war or for pleasure, or when the chief persons of one tribe make a visit to another. In such cases they are richly ornamented with locks of human hair intermixed with bunches of gray beard, strung from the stem projection to the place raised for the steersman. These ornaments are in the greatest estimation among them, and a bunch of gray beard is in their view what the feathers of the ostrich, or heron, or the richest plumage would be in ours. The seat of the coxswain is highly ornamented with palm leaves and white cloth; he is gaily dressed and richly ornamented with plumes. 502 The chief is seated on an elevation in the middle of the canoe, and a person fancifully dressed in the bow, which has the additional ornaments of pearl-shells strung on cocoa-nut branches raised in the forepart of the canoe. She is worked altogether by paddles, and those who use them are placed, two on a seat, and give their strokes with great regularity, shouting occasionally to regulate the time and encourage one another. These vessels, when collected in a fleet and in motion, with all their rowers exerting themselves, have a splendid and warlike appearance. They were paraded repeatedly for my inspection, and in all the reviews they appeared greatly to pride themselves on the beauty and splendour of their men of war. They are not, however, so fleet as might be expected, as our whale boats could beat them with great ease.

501 226 Their fishing canoes are vessels of a larger and fuller construction, many of them being six feet in width, and of an equal depth. They are managed with paddles more resembling an oar, and are, in some measure, used as such, but in a perpendicular position, the fulcrum resting on the outriggers projecting from each side. With those they proceed to the small bays on the coast, where they fish with the scoop net, and with the hook and line. They have also smaller canoes, which 501 are commonly nothing more than the hollow keels of the large ones, after the upper works are taken off; these are furnished with outriggers, and are used for fishing about the harbour. The canoes used for the purpose of navigating from one island to another, a navigation very common, are similar in their construction to the larger kind of fishing canoes, and are secured two together by beams lashed across. These are called double canoes, and are furnished with a triangular sail made of a mat, simi

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

indicates the speed with which new appliances of obvious value are accepted by the natives. The new outrigger is indirect, and consists of three elements: the float, the uprights, and the crosspieces. The float consists of a peeled log of fau wood four to five inches in diameter, slightly shorter than the canoe. This is usually sharpened at the forward end only, the cutting being done entirely from the lower side, but a few specimens were seen which had been sharpened at both ends, apparently with the idea of making the canoe completely reversible. The uprights, about two feet long, are usually made of small barrel staves. A triangular notch about two inches deep is cut in the upper end. Eight inches below this notch the uprights are pierced by a rectangular hole an inch and a half to two inches square. These uprights are permanently attached to the float. The unnotched ends of the staves are wedged into longitudinal slits near either end of the upper surface of the float. The crosspieces are peeled poles of fau or hard wood about eight feet long and three inches in diameter at the butt. Their outer ends are sharpened so that they will readily pass through the rectangular holes in the uprights.

The outrigger is assembled and attached as follows: The squared ends of the cross poles are fitted into the holes of the uprights, their points projecting about two inches on the outer side. The whole outrigger is then placed on the right side of the canoe, the crosspieces extending across it on the line of the hard wood plugs, with their butts projecting a few inches beyond the left gunwale. One end of a light rope is then fastened to the projecting end of the front crosspiece, outside the upright. The rope is then carried over the top of the upright, through the notch, and along the crosspiece to the inner side of the right gunwale. It is then passed back and forth diagonally over the crosspiece and around the inside and outside ends of the plug until the crosspiece is held rigidly. The rope then runs along the crosspiece to the left gunwale, where the same lashing is repeated. Some slack is then left in the canoe, and the left end of the rear crosspiece is lashed, the rope passing from there to the right gunwale lashing the crosspiece there, and out along the crosspiece and over the end of the upright to the outer end of the crosspiece, where it is tied. Any rope left over is carried back along the crosspiece and coiled in the canoe.

An outrigger of this sort can be attached or removed in a few moments, and the single rope used to lash it is available for other purposes when not in use on the canoe. When a canoe is beached the owner usually removes the outrigger at once and stores it in a safe place, thus making the canoe useless and safeguarding it from theft.

Small fishing canoes of the type described are rarely used for trips of any length. They are not sailed but are commonly paddled by two men. One man sits on the stern crosspiece of the outrigger where it crosses the boat, while the other wedges himself between the thwarts amidships. Most of these canoes are completely reversible, and they are sometimes paddled with the outrigger on the left instead of the right. The narrowness of these craft, and their high center of gravity (for the paddlers sit practically on top of the canoe) make them very unstable, and in spite of the outrigger they frequently capsize. The natives right them by getting on the outrigger and forcing it down under the canoe and up the other side.

VAKA POTI

The *vaka poti*—a craft that appears to be a local development—is an interesting example of the native adaptation of European ideas. It may be described as follows:

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

501 396 [824] As the name indicates, the *vaka poti* is a hybrid of canoe and boat, and is larger and more seaworthy than the fishing canoe, being twenty to twenty-five feet long with a maximum beam of two to two and a half feet. A long strip of breadfruit or temanu wood, eight inches to a foot in width, about four inches thick and tapering to a point at both ends, serves the double purpose of keel and bottom. It is smoothly rounded on the outside and slightly hollowed along the center of its upper surface. This is probably an extreme modification of the dugout underbody of the old built up canoes. Longitudinal slots are cut in either end of this keel and into these two flat, slightly curving pieces of temanu wood are bolted. These serve as the stem and sternposts of the boat, and are identical in form. Short light ribs are then bolted to the keel along both edges, their short lower arms resting upon its upper surface. The sides of the boat are built up with thin planks of commercial lumber which are laid on with an overlap from above downward—that is, the boat is clinker built. These planks are carefully dressed along the points of contact to insure a tight joint, and are fastened into grooves in the sides of the stem and sternpost. The gunwales are finished with a narrow flat strip of wood. At either end of the boat, immediately below this strip, a triangular piece of plank is put in, decking the last two or three feet of the bow and stern. The boat is braced by three broad flat thwarts which also serve as seats. One of these thwarts is placed in the middle and the other two at either end, two to three feet within the edges of the end deckings. The forward thwart is pierced with a hole three or four inches in diameter which, with a corresponding block on the keel, serves to step a mast. These crafts are always provided with an outrigger similar in shape and attachment to that of the fishing canoe, but of proportionately greater size.

Alexander, who visited Nuku Hiva in 1899, saw a slightly different form of outrigger in use with the *vaka poti*. He says (2, p. 746): "From the gunwale to the outrigger float of these canoes is an average of 7 feet. The outrigger frame consists of five pieces of wood, namely, two poles or crosspieces seized across the gunwales 4½ feet apart, one forward and the other aft of center; two stanchions connecting crosspieces of the outrigger float, and a brace which is seized to crosspieces just outside the gunwale. That part of the crosspieces between the gunwales answers the purpose of thwarts, the upper side being hewn to a flat surface. The outboard ends are sized to the perpendicular pieces, or stanchions, the length of which is, as a rule, the distance from the gunwale to the water line. These pieces are sized to the top side of the float, the sizings extending all the way around the float, but done so neatly as to offer little resistance to the water. The crosspieces, float, and stanchions are braced with withes to prevent them from being twisted and thrown out of position by coming in contact with rocks. . . . The material used in sizing the outrigger frame together is coconut fiber twisted into a small line."

824 ● 502 A *vaka poti* is normally handled by four men, one of whom sits in the stern and steers with a paddle while the other three row with short oars of ordinary European form. The bow and stern oars are placed on the side opposite the outrigger, the middle oar on the outrigger side, working within it.

Every craft of this sort is provided with a leg of mutton sail of canvas like that commonly used on ships' boats. When not in use the sail is stored under the short deck at one end of the boat, while the poles which serve as mast and boom are lashed along the crosspieces of the outrigger. The heavier of these poles, which is about nine feet long, serves as the mast. When the sail is to be hoisted, the mast is passed through loops of string tied along one edge of the sail, the loop nearest the masthead being firmly tied to the pole. Two light ropes are then attached to the masthead opposite each other and the mast is stepped, the butt passing through the hole in the forward thwart and resting in the hollowed block in the keel. The two ropes from the masthead are then fastened to the forward outrigger crosspiece just outside the gunwales of the canoe. A third rope is sometimes run from the masthead to the prow, but this is not common. The lighter pole serves as the boom and passes through the loops along the lower edge of the sail. The outermost loop is firmly tied to the boom, and a rope is attached to its outer end. The boom is then gradually thrust outboard until the sail is fully spread and only the inner end of the boom rests against the mast. This end simply rests against the mast and is not attached to it.

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

Vaka poti are rarely if ever used for inter-island voyages as most of the villages possess whale boats, which are more suitable for such trips. The natives, however, make fairly long coasting voyages in the *vaka poti*. They keep as close in shore as possible, rowing along the edge of the breakers in the narrow belt of comparatively calm water caused by the backwash from the cliffs. Even when there are large bays along the route they prefer to skirt the shore rather than to cut straight across. This custom of lying close inshore no doubt accounts in part for the indifferent way in which the boats are sailed. When the wind is astern the sheet is paid out on the side away from the outrigger, and as there is no way of reefing in case of a strong wind it is necessary for the occupants of the canoe to lean far out on the outrigger side or even climb out on the outrigger frame to keep the boat from capsizing. When the wind is on the port quarter the sheet is paid out on the outrigger side, but it is dangerous to sail this way as a sudden puff may drive the outrigger under and capsize the boat. When the wind is abeam the natives lower sail and row out against it for some distance, then spread sail and come in at a long slant with the wind on the quarter, repeating the maneuver whenever they get too close to the coast. They do not seem to understand tacking, and never sail except with a following wind.

ANCIENT CANOES

THE DUGOUT

Two ancient types of canoe are remembered by the natives, a small fishing canoe, and a built up war canoe. The small canoe is said to have been a simple dugout, identical with the modern fishing canoes already described except that it lacked the plank gunwales and had an outrigger of the ancient form (p. 309). Porter (49), who mentions these canoes, says that they were "commonly nothing more than the hollowed keels of the large ones after the upper works have been taken off." They appear to have been used only around the harbors, all longer voyages being made in canoes of the built up type.

BUILT UP CANOES

Large built up canoes have been obsolete for many years, as the Marquesans were quick to see the superiority of the European small craft and soon learned to imitate them. Even in 1838 Du Petit-Thouars (48, p. 348) says that the ancient canoes had been largely replaced by whale boats which the natives obtained from passing ships. Small built up canoes have, however, continued in use until comparatively recent times and a seaworthy example is still to be seen on the island of Fatu Hiva. The form of these smaller craft is well remembered by many living persons and from their descriptions, the numerous early

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

The longitudinal strips covering the outside seams of the canoe were painted black and ornamented at each lashing by tufts of white feathers of the *tevake* bird. The feathers were placed on the stern side of each lashing, and were held in place by the two or three rearmost loops, their inner ends resting directly upon the strip. 501 531 [237]

The temporary decorations in most general use consisted of coconut fronds which were placed along the sides of the bow and stern platforms with their lower edges trailing in the water. According to one informant they were also placed along the sides of the canoe, but no mention of this is made by early writers. Stewart (59, p. 244) says that in the large canoe seen by him "between the figure head and the bow, three green coconut leaves, four or five feet high, were fastened erectly." Porter (49, p. 102) says: "The seat of the coxswain is highly ornamented with palm leaves and white cloth." 501 531 824

Porter (op. cit.) says that the bow was ornamented with pearl shells strung on coconut branches. [237]

Two cords were run from the rear corners of the stern platform to the tip of the stern piece, these cords being decorated with tufts of human hair and *pava-hina* (ornaments made from white beards). These cords are still present in one of the old models, attached to the ends of long poles projecting from the stern platform. It seems probable that long tapa streamers were also attached to the stern piece, as several of the models are decorated in this way. 501 531 [824]

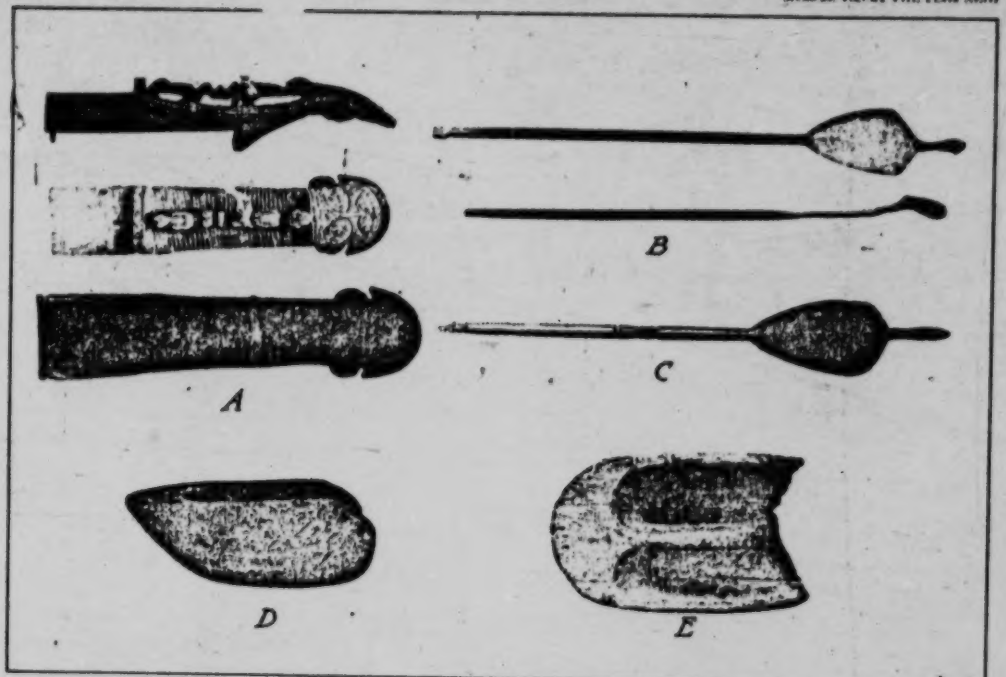
Stewart (59, p. 327) says: "A skull was lashed on each corner of the platform elevated at the stern." According to an old informant, the bodies of any enemies killed during a raid were laid across the neck of the bow piece during the homeward voyage. [127]

HANDLING OF THE CANOES

According to informants the large war canoes were never sailed, but small canoes and double canoes, made from two craft of this type lashed together, were sometimes sailed. The paddlers sat two on a seat and paddled rhythmically, usually chanting in time to the strokes. The steersman sat on the raised stern platform, using a long paddle of ordinary Marquesan form. According to one informant there were two steersmen, one on either side. Porter (49, p. 102) says of these craft: "They are not so fleet as might be expected, as our whale boats could beat them with great ease," and all the early accounts agree that they were rather poorly handled. 502

SPECIAL TYPES OF CANOES

Mention has been made of double canoes, but according to all the information obtained by the author these were simply canoes of the built up type which 501



CANOE PARTS AND EQUIPMENT: *A*, SIDE, TOP AND BOTTOM VIEWS OF BOW PIECE FROM OLD MODEL; *B*, REAR AND SIDE VIEWS OF ORDINARY PADDLE; *C*, MODERN CARVED PADDLE; *D* AND *E*, SIDE AND TOP VIEWS OF CANOE BAILER.

7: Lemon E-5 (1920-1921) 1923 OX6 Marquesas OX6

Exh. plate 4

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